

Question: What is the probability that z is greater than -1.82 , given that z is a standard normal variable?

Solution: $P\{z > -1.82\} = 1 - P\{z \leq -1.82\} = 1 - \Phi(-1.82) = 1 - (1 - \Phi(1.82)) =$
 $= \Phi(1.82) = 0.9656.$

Here $\Phi(x)$ is the Standard Normal Cumulative Distribution Function. Value $\Phi(1.82) = 0.9656$ is taken from the table.

Answer: 0.9656.